TWICKENHAM RIVERSIDE

MAINTENANCE AND MANAGEMENT PLAN

LDĀDESIGN

9734 – Twickenham Riverside Stage 4+

25th October 2024

LDĀDESIGN

1.0 Long Term Design Objectives

This is the re-development of the Twickenham Riverside site and responds to the approved landscape masterplan objectives for the wider scheme. Water Lane Building and Wharf Lane Building sit on the eastern and western wings of the site, interfacing with the River Thames to the south and King Street to the north. The play area and pétanque under London Plane trees lie at the centre of the development and remain all access from King Street.

The intention is to create a varied and interesting landscape across the site that responds to Thames Valley and Northern Thames Basin landscape character areas and the Thames heritage. Materials have been chosen for their industrial aesthetic as well as their durability. Most of the planting can tolerate periods of standing water or are shade tolerant. Trees, shrubs, and groundcovers are selected for aesthetic and structural characters intertwined with more ornate and colourful planting to create seasonal interest and multi-species habitats.

In terms of irrigation, a rain garden will capture surface run-off, and secured bib taps will allow for manual watering in periods of hot and dry weather for whole the site.

2.0 Management Responsibilities

The intention is for LBRuT to appoint a managing agent who will be responsible for the maintenance and management of the hard and soft landscape elements across the site, before Practical Completion, or earlier if necessary. The managing agent should ensure that all hard and soft elements are maintained in line with the schedule appended to this document. The managing agent should ensure that public health and safety are always considered, and landscape areas should remain clean and free from obstacles and elements that could lead to injury or harm.

If within a period of 5 years from the date of planting that tree or any tree planted in replacement for it, is removed, uprooted, destroyed, or dies (or becomes in the opinion of the local planning authority seriously damaged or defective) then the tree shall be replaced in the same location to reflect the specification of the approved planting scheme in the next available planting season / within one year of the original tree's demise unless the local planning authority gives its written consent to any variations.

Twickenham Riverside Maintenance and Management Schedule:

Element	Maintenance requirements
Litter picking (general)	Regularly remove all deleterious items, litter, fallen branches, and other rubbish, and leave in a clean and tidy state.
Resin bonded footpaths	Pétanque and Slip Way Areas
	A mechanical sweep or hand sweep is required after the initial installation.
	A further mechanical or hand sweep may be required (3-6 months after the initial sweep which should be carried out by the surfacing installed). The brushes should not be metal.
	Periodically thereafter, a visual examination by the client, will ascertain if any further sweeping is required. It is important that very little excess aggregate is allowed to accumulate on the surface.
	It is important that no loose aggregate remains as this will result in the bonded gravel splitting and working out of the resin, which will result in degeneration of the surface and may negate any guarantee.
	Cleaning
	Oil, dirt and most other stains
	Apply "Fairy Liquid /Gunk" neat to the surface using a stiff brush. Allow to penetrate for 10 minutes then pressure wash from surface.
	If the staining is more persistent, we recommend that the client contact the surfacing supplier for a cleaning regime/options
	Algae/Moss growth
	Apply a mild Herbicide solution. Allow to work for recommended time and brush off. The surface may be lightly pressure washed.
	Care should be taken however to prevent damage to the surface with excessive water pressure (up to 150 bar rating). Only cold water should be used, and the water lance should be kept at least 300mm from the surface.
	Chewing gum Obtain a "Cum Demouse" and apply as not manufacturar's instructions
	Obtain a "Gum Remover" and apply as per manufacturer's instructions.
	Replacement/Damage
	If the resin bonded surfacing degenerates, or bare patches appear, seek guidance from the surface installer about the best method to reinstate the surfacing. Keep records of the type of aggregate used, so this can be replaced like for like.
	Weed Control
- Concrete retaining	Unfortunately there is no such thing as a weed-free surface. If detritus is allowed to accumulate on a surface, it will only be a matter of time before weeds or other plants germinate. Secondly, when properly constructed, weeds do not grow through
wall	block paving. Weeds will grow into paving, by colonising the sand filled joints or settling onto accumulated detritus, but it is very rare for weeds to grow through 200mm or so of pavement structure.
Concrete blister	Weeds can usually be pulled off the surface of most paving, or scraped off using a hoe or similar tool. Where roots have been sent down into the jointing, removal of the weed often brings away some of the sand, and this should be replaced as
paving	soon as the surface is clean. Partially-filled or empty joints are detrimental to pavement performance.
- Concrete tactile	• Regular brushing disturbs any newly emerging weeds and removes them before they can establish themselves.
paving	• Weed killers, when used with care, can be very effective at killing existing weeds and deterring re-colonisation for a period of weeks or even months.
- Concrete kerbs	Look for products which have been specifically developed for use with paving or in gardens, rather than general herbicides which kill everything. Contact weed killers work by coming into contact with the weed and are suitable for rapid killing of
	simple surface weeds. A systemic weed killer takes longer to kill the weed, but it is absorbed and taken into the whole plant and not just the above-ground leaves and stems. Always follow the manufacturer's instructions and avoid washing off
	into any planted areas.
	Power Washing
	When used correctly power washers can help to keep paving in good condition, but used to excess they can damage the paved area and shorten its service life.
	When using any form of power washer the following guidelines should be strictly adhered to:
	• Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.
	• The power washer should be used on a setting which is sufficient to remove the dirt without causing any further distress. A low-pressure setting is recommended.
	Winter
	Winter De-icing salts can be used during the winter months. Rock salt can be applied to most of Marshalls' concrete and natural stone products without risk of damage, however once the area has dried out after any thaw, you may notice some temporary
	discoloration caused by the salt material. Normal weathering should soon remove such discoloration. If there is concern to avoid temporary discoloration of a paved area, then other de-icing materials should be used.
	Joints
	Re-brush sand joints regularly during the first year. Continue to top up when necessary or if any pavers become loose.
	the study during the list year. continue to top up when necessary of h any pavers become loose.
	Risk Items
	Do not attempt to move heavy equipment, plant or the like over the unprotected floor surface or any Structural Movement Joints, Access Covers, Service Ducts etc. without laying suitable protection (minimum 12 mm floor boarding) to protect the
natural stone to	works and spread the loads, this must include beneath out riggers. Do not use cleaning machines or plant that have hard plastic or metal wheels as scoring or tracking will result, and edges and corners of stones will be damaged. Do not allow
footways, shared	leakage of oils from Access Equipment or the like. Use only suitable protection on the run in areas and underneath the equipment whilst in use or stationary to prevent accidental spillage on the paving. Oil/diesel stains are virtually impossible to
surface & boat house	remove and inevitably lead to replacement stones being required. Periodic inspection of the floor is required to highlight any broken or damaged tiles. These should be made safe as soon as they are found but in any case replaced as soon as
	possible to ensure that they do not become trip hazards for the users of the floor and to prevent damage to adjacent tiles.
Large sized natural	

stone to square & King Cleaning – Section 1

	Competency of that company's staff/employees must also be demonstrated and
must be a prerequisite of employment. They must understand the product they are cleaning together with the cleaning materials to be used. Fully detailed Safety N	Method Statements, including relevant Risk & CoSHH Assessments, must be

- Tactile paving obtained from the company and must be complied with at all times. Employment of a non specialist / inexperienced cleaning company lacking in stone cleaning knowledge could and probably would cause the floor to not be cleaned properly, with long term dirt being sealed in and joint damage, discolouration and damage occurring. Marshalls Plc are aware that certain cleaning agents are promoted by suppliers that purport to be suitable for use when cleaning Natural Stone; these should
- Yorkstone coping only be used after research into the chemical compounds of the agent by the cleaning company/consultant. Small discreet test areas must always be undertaken prior to general use.

Cleaning – Section 2 Corduroy warning

- paving to steps The following cleaning method is generic and a site-specific methodology for cleaning the paving should be ascertained having engaged a specialist Natural Stone Cleaning Company or from engaging a specialist Natural Stone Cleaning Consultant. Marshalls Plc are not a stone cleaning company and assume materials are installed in accordance with all relevant codes of practice and the specification. Marshalls Plc would be pleased to supply the details of company's known to them that can - Granite sets to provide cleaning consultation services. Any spillage (food & drink etc.) on the floor is to be cleaned up immediately; the acidic nature of certain foodstuffs and beverages will lead to the stone becoming acid etched, an almost irreversible condition,
- carriageway if the spillage is allowed to remain. Initially, blot the area of the spillage with paper or cloth towels to remove most of the spillage; do not wipe the spillage, as this will spread it over a greater area. Then wipe the spillage with a clean cloth and
- warm water before drying with a clean dry cloth. If this is deemed to be unsuccessful other methods will need to be employed. The current Stone Federation of Great Britain code of practice recommends that the floors should be kept clean by - Granite kerb regular daily brushing with a soft brush or vacuuming with a hard floor vacuum as dust and debris settling on the floor can, occasionally, cause slipperiness. Prior to washing the floor ensure that it is swept as above. The natural stone floor should
- be washed weekly or on an, as and when required basis, using clean warm water to which a neutral detergent has been added, in accordance with the manufacturers recommendations, which are applied with a clean cloth, mop or washer dryer - Yorkstone edge machine for large areas. Remove any surplus residue and allow the stone to dry naturally. Any product used should only be used in accordance with the manufacturer's instructions and cleaners are strongly urged to test on a discreet area prior to

DO NOT USE ANY HOUSEHOLD OR COMMERCIAL CLEANING AGENTS OR CHEMICALS ON NATURAL STONE SURFACES. THIS INCLUDES ANY PRODUCTS SUCH AS BLEACH, ACIDIC CLEANING AGENTS, ABRASIVE CLEANING AGENTS, WHITE SPIRITS; OIL BASED CLEANING AGENTS AND WAXES, AND HOUSEHOLD SOAPS.

Under no circumstances should additives of any sort be used during cleaning unless specifically approved by the cleaning contractor/consultant, as discolouration of stone and grout will occur if chemicals are introduced and the physical appearance of the stone could be radically changed i.e. a mixture of dull and glossy patches and streaking. If the water to be used is classified as 'hard' advice should be sought from the local water authority in order to ascertain a suitable watersoftening agent, which must be used in order to obtain the best results. Major stains will need professional attention. Care must be taken to assess whether changes in stone appearance or defects will result from the introduced cleaning media. Inappropriate cleaning may serve to worsen a discolouration. Unless there is particularly difficult stains, whatever the cause, then vigorous, rough scrubbing should not be required. Abrasives must never be used, and domestic soap leaves a slippery scum, particularly in hard water areas.

Cleaning Machinery

The largest single problem relating to successful floor cleaning concerns the correct machine to use for the project. Marshalls Plc again urge that only specialist machine suppliers are interviewed in connection with the provision of machines. As with the cleaning company, only suppliers providing machines that have proven experience of being able to carry out the cleaning process without damage should be used. This criteria also refers to the type and quality of brushes, water tanks, vacuum attachments and wheels. The frequency of use must also be determined from the machine manufacturer/suppliers, however water must be changed regularly and not recycled which will result in dirty joints, and surface residue, which in time will cause the store to become slippery.

Grouted joints are not impervious to both footfall and cleaning damage over a period of time and it must be understood that minute grout loss is occurring all the time. By the very nature of the material it will degrade over a period of time. Overly aggressive cleaning by the machine using the wrong type of brushes or pads will accelerate a natural degradation. Grout loss is the single most obvious visual problem that can and does occur. If grout is 'pulled out' by the cleaning machine and water is then dispensed into the joint, then damp 'picture framing' will occur on the stone surface; it will dry out in time, however the longer an open joint remains so, then this will occur continuously. Any grout loss should be made good as soon as possible after discovery; all cleaning staff etc. must be encouraged to report areas of grout loss when seen. The making good is to be carried out by a person competent with grouting natural stone; materials used are to comply with those detailed in the specification of the construction detail. The new grout will be a different (new) shade to the existing joint until cleaned and trafficked to match existing joints, this may take some weeks. Great care must be taken when driving over Metal Structural Movement Joints and protection must be in place. Thermal joints where mastic has been applied is less of a problem, and should not be affected.

	Replacing Damaged Stone
	In the event that there is a need to replace a stone(s) then it is strongly recommended that this is carried out only by a specialist company as the position of the stone to be replaced, the size/weight of the stone to be replaced and the extent of work required will need to be properly and thoroughly assessed by an expert in this field before a Safety Method Statement can be issued. Failure to comply may lead to serious injury and/or damage to the stone.
	Definitions
	Hot Water - Of High Temperature (will cause a burning sensation to the skin)
	Warm Water - Having a moderate degree of heat (will not cause a burning sensation to the skin)
Cycle stands	At each maintenance visit, undertake regular inspection for damage. Repair if possible or replace damaged cycle stands to match original specification.
Flush/ raised steel edge	Ensure metal edgings are flush with proposed paving and are fixed firmly in place. Metal edgings should be straight and true and connections between steel sections should be as clean as possible. All edging interfacing with soft landscape should
& steel edge to terrace	be fixed robustly in place with a concrete haunch or stake system depending on location and proposed loadings. If edgings become damaged or loose they should be replaced or remedial works should be carried out to remedy any problems.
Slot drain, channel	Inspect gully drains and slot drains on a monthly basis to ensure these are free from debris, blockages and other elements that might affect their performance and ability to deal with surface water runoff.
drain, area gully and	
SuDS gully	Slot drains can be jet washed to remove debris build up. Any arising's should be removed from site by estate management.
Handrails	Regularly inspect handrail connections both in ground and where the post and the handrail are connected. Handrails are proposed to be satin brushed stainless steel, so should remain free from scratches and corrosion.
	If any handrails are damaged, estate management should assess whether the handrails are repairable or damaged beyond repair and employ a specialist metalworker to carry out repair works, or remove and replace with new handrails.
Metal balustrade/ fencing/ railing	Regularly inspect balustrade, fencing and railing elements to ensure that fixings are robust and metalwork is free from damage and rust. Treat any deep scratches with an anti-corrosion coating and apply touch up paint, colour match paint to existing.
	If any fences are damaged, estate management should assess whether the fences are repairable or damaged beyond repair and employ a specialist metalworker to carry out repair works, or remove and replace with new panels.
Bollards	Stainless steel bollards should be regularly inspected for damage. Any bollards damaged through vehicular collision should be replaced and foundations re-instated to a civil engineer's detail and specification. All paving around bollards should be inspected and foundations re-instated to a civil engineer's detail and specification. All paving around bollards should be inspected and foundations re-instated to a civil engineer's detail and specification. All paving around bollards should be inspected and sand joints should be re-swept regularly to ensure the paving surface is firm and free from excessive movement.
Brick wall	Regular Inspection Frequency: At least twice a year. Purpose: Check for cracks, signs of moisture infiltration, efflorescence (white powdery deposits), and any loose or damaged bricks. Tools: Use a flashlight for dark areas and a magnifying glass to inspect small cracks.
	Cleaning Frequency: Annually or as needed. Methods: 1. Mild Soap and Water: For general dirt and grime, use a soft brush with a mixture of mild soap and water. 2 Pressure Washing: Use on a low setting to avoid damaging the brick or mortar. Avoid using it frequently. 3. Efflorescence Removal: Use a mixture of water and white vinegar or a commercial efflorescence cleaner. Precautions: Avoid harsh chemicals that can damage the brick or mortar.
	Repointing Frequency: Every 20-30 years, or as needed. Signs: Mortar joints are crumbling, gaps between bricks, or visible water damage. Procedure: Remove the damaged mortar to a depth of about 1 inch and refill with new mortar. Ensure the new mortar matches the original in color and composition. Tools: Chisel, hammer, trowel, and pointing tool. Sealant Application: Frequency: Every 3-5 years. Purpose: Protect against moisture infiltration and freeze-thaw cycles, which can cause spalling (brick surface flaking). Types: Use breathable sealants designed for masonry to allow moisture to escape. Application: Apply evenly with a brush or sprayer on a clean, dry surface.

Repairing Cracks and Damaged Bricks

Crack Repair: Small cracks can be filled with masonry sealant or repair caulk. Larger cracks may require professional repair. Brick Replacement: Remove the damaged brick by carefully chiseling out the mortar around it. Replace it with a new brick and mortar.

Controlling Vegetation

Frequency: Ongoing. Purpose: Prevent vines, moss, or other plants from growing on the brick wall, as roots can penetrate and damage the mortar. Method: Remove vegetation manually or use a herbicide safe for masonry.

Addressing Water Drainage Issues

Purpose: Ensure that water drains away from the brick wall to prevent moisture buildup. Methods: 1. Check and repair gutters and downspouts. 2. Ensure proper grading around the wall. 3. Install weep holes if necessary to allow trapped moisture to escape.

Protection from External Damage

Avoid Impact: Protect the wall from physical impacts, such as from vehicles or lawn equipment. Covering: If working near the wall, cover it with a tarp to prevent splashes or chemical spills from damaging the brick.

Efflorescence Management

Identification: Efflorescence appears as white, powdery deposits on the brick surface. Removal: Brush it off with a stiff brush and water. Use a mild acid solution if necessary, but test on a small area first. Prevention: Ensure proper drainage and use water-resistant mortar during construction or repointing.

Winter Care

De-icing: Use non-salt-based de-icers on pathways near brick walls to prevent salt damage. Snow Removal: Clear snow from the base of the wall to prevent moisture absorption. Proper maintenance not only enhances the appearance of brick wall but also extends its lifespan. Regular checks and prompt repairs are key to avoiding costly damage.

Wet Pour Rubber Play Routine Cleaning

Surface

Sweeping: Regular sweeping of leaves, dirt, and other debris to prevent buildup that could damage the surface or make it slippery. Power Washing: Use a low-pressure power washer to clean the surface. High-pressure can damage the rubber. Moss and Algae Removal: Wet pour surfaces can become slippery due to moss or algae, especially in shaded or damp areas. A mild detergent or algae remover should be used regularly to prevent growth.

Visual Inspection: Regularly inspect the surface for wear, tears, cracks, or damage. Pay attention to areas with heavy foot traffic, seams, and edges. Impact Testing: Over time, the shock absorption qualities of wet pour surfaces can degrade. Annual or semi-annual impact attenuation testing ensures the surface maintains its safety standard.

Minor Repairs: Small holes or tears can be repaired with a wet pour repair kit. It's important to address these early to prevent further damage. Edge Repairs: Edges can wear down or lift, creating trip hazards. Re-bonding or replacing damaged sections may be necessary. Surface Top-Up: Over time, the top layer of rubber granules may wear down. A top-up layer may be required for areas that experience high usage.

Avoiding Damage

Prohibited Activities: Prevent sharp objects, such as pointed shoes, bikes, or skates, from being used on the surface, as they can puncture or tear the rubber. Chemical Spills: Avoid contact with harsh chemicals (e.g., solvents, oils) that can degrade the rubber. Furniture Movement: Playground furniture or equipment with sharp edges should not be dragged across the surface to avoid tearing.

Drainage Maintenance

Proper Drainage: Ensure the playground's drainage system is functioning properly. Water pooling can weaken the surface and encourage algae growth. Clogged Drains: Keep drainage channels clear of debris to prevent water stagnation.

Winter Care

Snow Removal: Use plastic shovels to remove snow. Metal shovels or harsh snow removal tools can damage the surface. De-Icing: Avoid using salt or harsh chemical de-icers. Instead, use non-corrosive de-icing products, such as sand or rubbersafe alternatives, to prevent damage.

UV Protection

Fading: Wet pour rubber can fade due to UV exposure. To maintain its appearance, applying a UV-resistant coating may help reduce fading over time.

Routine Raking and Leveling

Raking: Regularly rake the sand to keep it level and soft, ensuring even distribution across the play area. High-traffic areas (such as under swings and slides) tend to get compacted and may need extra attention. Filling Depressions: Level out low spots where sand may have been displaced due to digging or play activity to avoid trip hazards. De-compaction: Over time, sand can become compacted, especially in areas with frequent use. Rake the surface to loosen the sand and restore its cushioning properties.

Debris and Contaminant Removal

Regular Cleaning: Remove debris such as leaves, litter, sticks, and stones that may find their way into the sand. Animal Waste: Check for and remove any animal droppings. Sand surfaces are sometimes attractive to animals, especially in open areas. Installing barriers or netting when the area is not in use can help deter animals. Broken Glass and Sharp Objects: Inspect the area for sharp objects like glass, nails, or any hazardous materials that may pose a danger to children.

Inspection for Safety Hazards

Depth Check: Maintain an adequate depth of sand, especially in fall zones around playground equipment, to provide sufficient shock absorption. Regularly monitor the depth to ensure it meets safety standards. Foreign Objects: Periodically sift the sand for any foreign objects that could cause injury, such as rocks, glass, or other debris that may not be visible on the surface.

Topping Up Sand

Refill and Replacement: Over time, sand may be displaced, blown away, or compacted. Topping up the sand to maintain proper depth and shock-absorbing quality is essential. High-traffic areas may need more frequent replenishment. Complete Replacement: Depending on usage, contaminants, and the level of maintenance, sand should be completely replaced every few years to maintain cleanliness and effectiveness.

Water Drainage Management

Good Drainage: Ensure that the sand pit has proper drainage to prevent water pooling. Stagnant water can promote bacterial growth and create a muddy, unhygienic surface. Avoid Waterlogging: If the area becomes waterlogged after rain, improve drainage or consider adding a covering or shelter to reduce excess water exposure.

Pest Control

Animal Deterrents: Consider installing covers or fencing to prevent animals from entering the sand pit. Cats, dogs, and other animals may be attracted to the sand for digging or waste. Insect Control: Sand can attract insects such as ants or wasps. Regular inspections and treatments (if necessary) can help keep pests at bay.

Weed and Plant Growth Control

Weed Removal: Periodically check for weeds or plants growing in the sand. These should be removed by hand or treated with a child-safe herbicide. Preventing organic material from settling in the sand can reduce the likelihood of plant growth.

Winter Care

Snow Removal: If applicable, snow should be gently removed using non-invasive tools like plastic shovels. Avoid using salt or harsh chemicals for de-icing, as they can contaminate the sand. Freezing and Thawing: Sand may become hard during freezing weather. Regularly loosening the sand can help maintain its softness and usability.

Health and Hygiene	
Cleaning and Sanitizing: Occasionally, the sand may need to be disinfected to prevent the spread of bacteria, fungi, or other pathogens. Non-toxic sanitizing products or UV treatment can be used. Moisture Management: Keep the sand dry when	
not in use by covering it or ensuring good drainage. Damp sand can attract mold, bacteria, and pests.	

Storage shed	Regularly inspect cycle storage structures for any damage or rust and repair appropriately.
	Ensure any drainage attached to cycle stores is free from debris (leaves, rubbish or other) and can discharge rainwater into designated gullies or surface water drains.

Softworks

JUILWUIKS	
itter picking (general)	Regularly remove all deleterious items, litter, fallen branches, and other rubbish, and leave in a clean and tidy state.
Watering (general)	Inspect the site at regular intervals and determine when watering is necessary and so on doing undertake watering if required and as necessary for the healthy establishment and continued thriving of all planting.
	In areas where drip feed irrigation is installed, ensure timers are adjusted seasonally to provide planting and trees with the correct volume of water.
	During periods of hot weather, watering regimes should be adjusted to ensure the continued health of planting. Preference is for watering to occurring the evening once temperatures have dropped and the planting is no longer in full sun.
Weed control	Beds, fence lines and hard surfaces shall be kept free from annual and perennial weeds by manual and/or chemical methods. Hand weed within planting beds between 1 March and 30 September before weeds and grasses set seed. Only
	proprietary brands of contact, translocated and residual herbicides to be used, and all pesticides/herbicides and the operatives using them must have the approval and conform to the latest legislation contained within Part III of the Food and Environmental protection Act and the Control of Pesticides Regulations 1986 as amended.
Trees generally	Tree and distruptive vegetation works are to be restricted to outside of the bird nesting season (March to August inclusive).
	Any dead, diseased or failed tree planting is to be in line with the original planting specification and should be planted at the appropriate time of year. Tree planting should ideally be in the root ball season and outside of this time frame, replacements must be containerized.
Tree planting	At time of planting: Install guy ropes, stakes and ties; cover with 70mm depth well-rotted organic mulch up to 1 metre around the base of the tree but not touching the trunk of the tree.
	At each maintenance visit during establishment: Weed and water as required; Maintain mulch at original depth; Check guy fixings, stakes and ties and adjust as necessary to avoid chafing and maintain firm support; Replace losses with original species; Prune dead, dying, crossing, rubbing and damaged branches and encourage new leader if necessary; Inspect regularly for stem wounds, pests and diseases and treat early.
	Once established: Remove guy fixings, stakes and ties when tree is deemed firm and self-supporting; Prune dead, dying, crossing, rubbing and damaged branches and crown thin early crowded branches when operations are easily carried out and arising's are minimal; Inspect regularly for stem wounds, pests and diseases and treat early.
Hedging	At time of planting cover planting bed around base of hedging with 70mm depth of well-rotted organic mulch, leaving 10cm (4in) collar free of mulch around any woody stem.
	At each maintenance visit during establishment: Weed and water as required; Re-firm soil around any loose plants without compacting planting bed; Maintain mulch at original depth; Replace losses with original species.
	Trim annually in early spring or late winter to maintain box shape.
Herbaceous perennial planting	At time of planting: cover planting bed with 70mm well-rotted organic mulch, leaving 10cm (4in) collar free of mulch around any woody stems.
	At each maintenance visit during establishment: Weed and water as required; Maintain any mulch at original depth, but ensure plants are not buried; Re-firm soil around any loose plants without compacting planting bed; Replace losses with original species.
	Once established: where plants are placed at high densities for instant impact and where they have established well and are spreading, remove whole plants along footpath edges and re-use in gaps where these may have developed; split plants in
	densely covered beds and re-plant gaps as necessary; hand weed within planting beds between 1 March and 30 September before weeds and grasses set seed; remove dead foliage and flower heads as considered necessary and otherwise maintain plantings in good horticultural practice suited to individual species.
	Any dead, diseased or unsuccessful planting is to be replaced with the original planting based on the planting schedule. Any substitutes need to be approved by the landscape architect. All replacements should be planted at the appropriate time of year, and should be avoided in prolonged hot or cold adverse weather.
Amenity Lawn (including any earth	At each maintenance visit, remove litter and debris prior to mowing and mow regularly to develop dense, hard-wearing sward. Do not mow in periods of prolonged dry weather. Lawns and grass surrounding swales should not be cut when wet.
landforms)	Cut every two weeks during growing season to maintain sward to 30-50mm, as appropriate. Mowing can be relaxed from late June to encourage flowering of perennial species, with mowing resumed once the sward begins to look untidy (after 4-8
-	weeks). All boundaries of grass areas shall be kept tidy, and management shall extend right up to any building line, wall, fence, service marker, manhole cover, signpost or other obstruction. Cuttings may be dispersed and left evenly spread over
	areas, but accumulation of cuttings which might cause damage to the underlying sward shall be collected and removed. Gang mower, rotary or cylinder mowers may be used depending on location and size of area.
Bulb planting	Any replacement bulb planting should be carried out in October and November depending on species.
	Bulb planting in planting beds should also not be cut back until the foliage has died back and has turned yellow or brown.

Twickenham Riverside Maintenance to be applied across all areas within boundary

ANNUAL LANDSCAPE MAINTENANCE MATRIX FOR BASELINE MAINTENANCE WORKS	

Category	Sub-Category	Description of Task	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Routine Maint	enance	In person days													
Responsive Ma	aintenance	As needed													
SITE WIDE MA	INTENANCE														
Site Wide Main	intenance	Control and remove weeds			1	2	2	4	4	4	2	1	1		21
		Regular inspection	1	1	1	1	1	1	1	1	1	1	1	1	12
		Top up mulch layer				2						2			4
		Prune to remove dead or dying and diseased wood and suckers to promote healthy growth			1							1			2
		Remove rubbish, debris and litter from soft landscape areas. Maintenance contractor to ensure that site is always in a clean and tidy condition	2	2	2	4	4	4	6	6	6	2	2	2	42
		Remove rubbish, debris and litter from hard landscape areas. Maintenance contractor to ensure that site is always in a clean and tidy condition	As needed in order to ensure that site is always in a pristine and tidy condition												
		Remove of all visible tree/ shrub stakes and ties						after plant	s have fully e	stablished					
		Invasive weed removal As needed													
		Pest control	As needed												
		Vermin control	As needed												
		Inspection immediately after heavy storm event					Imr	nediately afte	er heavy stor	m or flood ev	vent				
		Wind repair and clean-up							As needed						

SPECIFIC MA	NTENANCE													
Trees	Newly planted Trees within Soft and Hard Landscape	Fertiliser application		2	2	1						5		
		Irrigation/spot watering	As needed											
		Control and adjust staking/tree guys			As needed									
		Formative pruning					As needed							
	Tree repair & replacement works (as a result of damage by others)		As needed											
Tree r		Tree repair & replacement works	As needed											

Hedges	Clipped Hedge	Fertiliser application			2								2	
		Trimming			2	2		2		2			8	
	Irrigation/spot watering			As needed										
	Adjust, repair or replace protective fencing, shelter, ties and guards					А	s needed							
		Hedge plant repair & replacement works (as a result of damage by others)				А	s needed							
		Hedge plant repair & replacement works				A	s needed							

Shrub/ Groundcover	Shrub/ Groundcover Planting	Trim groundcover planting away from hard landscape and lawn areas			2		2	2		6		
Planting		Fertiliser application		1		1				2		
		Deadheading	As per requirement of individual plant species									
		Irrigation/spot watering										
		Shrub & groundcover repair & replacement works (as a result of damage by others)	As needed									

C	hruh	Q .	groupo	loovor	ropair	Q. r	eplacement	workel	lundor	dofocto	liability
5	nub	α	ground	luver		αι	epiacement		unuer	uerects	IIa DIIILY J

As needed

Horticultural Areas	Herbaceous Planting	s Planting The maintenance objectives given below, and which are related to the herbaceous planting of the area, only provide an outline description of the maintenance works required. The maintenance contractor who upkeeping of the herbaceous planting, will need to produce and submit specific maintenance guidance and specifications to the Contract Administrator and Project Landscape Architect for approval.								onsible for the				
		Inspection of the planting by the project Landscape Architect		1	2		2				5			
		Autumn leaf removal	2				2	2	2	2	10			
		Fertiliser application	submit proposal											
		Cut back dead and dying top growth as well as unsightly flower stems in order to maintain desired visual qualities	der As per requirement of individual plant species; maintenance contractor to submit proposals											
		Staking of herbaceous plants as necessary	As per requirement of individual plant species; maintenance contractor to submit proposals											
		Slug and snail control	As needed											
		Irrigation/spot watering	As needed											
		Replacement of plants (as a result of damage by others)	As needed											
		Replacement of plants			As need	led								

Lawns	Fine Lawn Areas	Mow lawn/ grass areas and remove arisings.			1	2	4	4	4	4	3	1	1		24
		Trim edges to planting beds and around trees			1	1	1	1	1	1	1	1	1		9
		Aeration					1								1
		Scarification/ Thatching					1		1						2
		Firming of Grass Areas		1											1
Top Dressing ApplicationImage: ComparisonFertiliser applicationImage: Comparison		Top Dressing Application			1										1
		1			1							2			
		Autumn leaf removal										1	2	1	4
		Irrigation			124443111										
		Replacement of grass areas (as a result of damage by others)						A	s needed						
		Replacement of grass areas						A	s needed						

	Hard Landscape Areas		
Areas & Site		Inspection of fences and site furniture	After each maintenance visit
Furniture			
		Clean and sweep of all footpaths	As needed
		Repair of hard landscape areas and site furniture	As needed
		Snow clearance	As needed
		Graffiti removal	As needed

After flooding event	Inspection immediately after heavy storm event	Jet wash floor surfaces, walls, railings and street furniture where is appropriate and use suitable pressure for each item	As needed
		Remove obstructions, rubbish, debris and litter from hard landscape areas. Maintenance contractor to ensure that site is in a clean and tidy condition	As needed
		Repair of hard landscape areas and site furniture	As needed
		Invasive weed removal	As needed
		Pest control	As needed
		Vermin control	As needed
		Wind repair and clean-up	As needed
		Replacement of tree and plants	As needed
		Deadheading	As needed
		Cut back dead and dying top growth as well as unsightly flower stems in order to maintain desired visual qualities	As needed
		Adjust, repair or replace protective fencing, shelter, ties and guards	As needed
		Control and adjust staking/tree guys	As needed

Item of work	Year 1	Year 2	Year 3	Year 4	Year 5+ to Year 10 onwards
Newly planted trees (minimum 4 routine maintenance visits per year)					
Carry out twice annual visits, and after high winds, to adjust tree guying systems	v	v	v	v	v
Maintain mulched tree surrounds in a weed free condition and allow for topping up mulch when required e.g. after two years	v	v			
Spot water as necessary to avoid the need for replacement due to dry periods (less than 30mm rainfall at the end of a four week period);	v	v	v	v	v

Inspect annually when trees are in full leaf and after storms to monitor health of trees	v	v	v	v	v
Carry out any works as required for health and safety immediately	v	V	v	v	v
Prune annually outside of the bird nesting season to ensure appropriate habit/form, remove obstructions to footpaths/roads/gardens, and remove dead/diseased/damaged wood	v	V	v	v	v
Replace any trees which have been removed, uprooted, destroyed or dies within 5 years after planting with trees of the same species and size as the originally planted at the same place	v	v	v	v	v

Item of work	Year 1	Year 2	Year 3	Year 4	Year 5+ to Year 10 onwards
Herbaceous and Shrubs Planting (minimum 4-6 routine maintenance visits per year)					
Re-firm plants after high winds and frost	v	v	v	v	v
Maintain the full depth of mulch until canopies close	v	v			
Maintain planting beds in a weed free condition through combined techniques of cultivation, hand weeding, and mulching until canopies are closed. Maintain the inside of tree/shrub guards in a weed free condition by hand weeding.	v	v	v	v	v
Apply fertiliser or compost if necessary to encourage vigorous, healthy growth	v	v	v	v	
Spot water as necessary to avoid the need for replacement due to dry periods (less than 30mm rainfall at the end of a four week period)	v	v	v	v	v
Replace any plants which have been removed, uprooted, destroyed or dies with plants of the same species and size as the originally planted at the same place, unless the Local Planning Authority gives its written consent for any variation	v	v	v	v	
Thin out selected species where appropriate e.g. where more vigorous species are taking over others					v

Item of work	Year 1	Year 2	Year 3	Year 4	Year 5+ to Year 10 onwards
Hard surfacing (regular visits as necessary)					
Inspect for damage to ensure safe for public use, performing its original function, and not visually detracting from area. Repair/replace/repaint/re-stain/clean as necessary	v	v	v	v	v
Cut back undergrowth, overgrowing or overhanging shrubs, hedges and minor tree branches to maintain an unobstructed route for pedestrians, cyclists and vehicles as appropriate	v	v	v	v	v
Undertake inspections of the hard landscape areas on a six monthly basis and repair any damaged areas. If any areas are reported as dangerous to users, repair immediately	v	v	v	v	v
Drainage systems associated with hard surfaces to be inspected annually and maintenance work undertaken as necessary, to engineers/suppliers requirements	v	v	v	v	V

Item of work	Year 1	Year 2	Year 3	Year 4	Year 5+ to Year 10 onwards
Site Furniture, Balustrade and Play area (regular visits as necessary)					
Inspect for damage daily, to ensure safe for public use, performing its original function, and not visually detracting from area. Repair/replace/repaint/re-stain/clean as necessary	v	v	v	v	v
Inspect play equipment daily, if any part of the play area or its equipment is unsafe, repair within the same working day.	v	v	v	v	v
Remove all litter, glass, animal fouling and similar debris from the surfaces within the playground and from the play equipment, daily. All animal fouling should be removed and the surface thoroughly washed down with a suitable disinfectant.	v	v	v	v	v
Sweep all hard areas to remove all resulting arisings from play areas as necessary.	v	v	v	v	v
Remove any excess dirt or graffiti	v	v	v	v	v